

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (canceled)

2. (currently amended) A vehicular control device according to claim ~~1~~35, wherein:

~~said at least one malfunction-information storing object of said plurality of malfunction-information storing objects~~ stores said malfunction information of said ~~each corresponding~~ one of ~~said at least one the~~ diagnosis targets; and

said malfunction-information managing object commands said at least one malfunction-information storing object to store said malfunction information of said ~~each corresponding~~ one of ~~said at least one the~~ diagnosis targets based on said result of said malfunction detection operation of said ~~each corresponding~~ one of ~~said at least one the~~ diagnosis targets.

3. (currently amended) A vehicular control device according to claim ~~1~~35, wherein each one of said ~~at least one~~ malfunction-information storing objects is prepared for each corresponding one of said ~~at least one~~ diagnosis targets or is prepared for each corresponding one of ~~at least one~~ malfunction check items that corresponds to said ~~at least one~~ diagnosis targets, respectively.

4. (currently amended) A vehicular control device according to claim ~~1~~35, wherein:

~~said~~ at least one malfunction-information storing object of said plurality of malfunction-information storing objects stores relationship information indicative of relationship between said malfunction information of said corresponding one of said plurality of diagnosis targets and said control instruction specified by said at least one malfunction storing object; and

said at least one malfunction-information storing object specifies said control instruction of said at least one MIL based on said relationship information.

5. (currently amended) A vehicular control device according to claim ~~4~~35, wherein ~~said~~ at least one malfunction-information storing object of said plurality of malfunction-information storing objects specifies said control instruction based on said malfunction information of said ~~each~~ corresponding one of said ~~at least one~~ diagnosis targets when a request for retrieving said control instruction is received from said malfunction-information managing object.

6. (currently amended) A vehicular control device according to claim ~~4~~35, wherein:

said control instruction specified by at least one of the plurality of malfunction-information storing objects is selected from a plurality of control instructions having different predetermined priority levels; and

said malfunction-information managing object outputs one of said control instructions having a highest priority level as said MIL information.

7. (currently amended) A vehicular control device having a self-diagnosis function for informing occurrence of abnormality in ~~at least one~~ a plurality of diagnosis targets by controlling at least one malfunction indicator light (MIL) in such a manner that operation of said at least one MIL is selected from one of lighting-on, flashing and lighting-off based on a result of a malfunction detection operation of each one of said ~~at least one~~ plurality of diagnosis targets, said vehicular control device comprising an object oriented self-diagnosis program stored therein for implementing said self-diagnosis function, said object oriented self-diagnosis program including:

a malfunction-information managing object that outputs MIL information for controlling said at least one MIL when a request for controlling said at least one MIL is received to operate in a selected condition, said selected condition being one of the following possible conditions: lighting-on, flashing and lighting-off, and said request for controlling said at least one MIL being different from a request for executing said malfunction detection operation of said each one of said ~~at least one~~ diagnosis targets; and

a plurality of malfunction-information storing objects, each of which stores malfunction information of a corresponding one of the diagnosis targets determined based on said result of said malfunction detection operation of said corresponding diagnosis target in view of a level of malfunction of said corresponding diagnosis target;

wherein each of the plurality of malfunction-information storing objects specifies a relationship between malfunction-information of its corresponding diagnosis target and said selected condition for controlling said one MIL, the relationship for one of the plurality of malfunction-information storing objects being different from that of another of the plurality of malfunction information storing objects.

8. (currently amended) A vehicular control device according to claim 7, wherein ~~said object-oriented self-diagnosis program further includes at least one malfunction-information storing object that stores malfunction-information of said each one of said at least one diagnosis target determined based on said result of said malfunction-detection operation of said each one of said at least one diagnosis target in view of a level of malfunction of said each one of said at least one diagnosis target, wherein:~~ said malfunction-information managing object commands said at least one of said malfunction-information storing objects to store said malfunction information of said ~~each one of said at least one~~ corresponding diagnosis target based on said result of said malfunction detection operation of said ~~each one of said at least one~~ corresponding diagnosis target; and

said malfunction-information managing object outputs said MIL information for controlling said at least one MIL based on said malfunction information of said ~~each one of said at least one~~ corresponding diagnosis target stored by said at least one malfunction-information storing object.

9. (currently amended) A vehicular control device according to claim ~~135~~, wherein said malfunction-information managing object outputs said MIL information when a request for controlling said at least one MIL is received, said request for controlling said at least one MIL being different from a request for executing said malfunction detection operation of ~~said each one of said at least one~~ of said plurality of diagnosis targets.

10. (canceled)

11. (currently amended) A vehicular control device having a self-diagnosis function for informing occurrence of abnormality in ~~at least one~~ a plurality of diagnosis targets by controlling at least one malfunction indicator light (MIL) in such a manner that operation of said at least one MIL is selected from one of lighting-on, flashing and lighting-off based on a result of a malfunction detection operation of ~~each one of said at least one~~ diagnosis targets, said vehicular control device comprising an object oriented self-diagnosis program stored therein for implementing said self-diagnosis function, said object oriented self-diagnosis program including:

~~at least one~~ a plurality of malfunction-information storing objects, each of which ~~that~~ stores malfunction information of ~~said each one of said at least one~~ a corresponding one of the diagnosis targets determined based on said result of said malfunction detection operation of said ~~each one of said at least one~~ corresponding diagnosis target in view of a level of malfunction of said ~~each one of said at least one~~ corresponding diagnosis target;

a malfunction-information managing object that commands ~~said at least one~~ of said malfunction-information storing objects to store said malfunction information of said ~~each one of~~ said at least one corresponding diagnosis target based on said result of said malfunction detection operation of said ~~each one of said at least one~~ corresponding diagnosis target, said malfunction-information managing object outputting MIL information for controlling said at least one MIL to be a selected condition based on said malfunction information of said ~~each one of said at least one~~ corresponding diagnosis target stored by said at least one of said malfunction-information storing objects, said selected condition being one of the following possible conditions: lighting-on, flashing and lighting-off; and

an MIL controlling object for controlling said at least one MIL based on said MIL information outputted from said malfunction-information managing object;

wherein each of the plurality of malfunction-information storing objects specifies a relationship between malfunction-information of its corresponding diagnosis target and said selected condition for controlling said at least one MIL, the relationship for one of the plurality of malfunction information storing objects being different from that of another of the plurality of malfunction-information storing objects.

12. (currently amended) A vehicular control device according to claim ~~4~~35, wherein said object oriented self-diagnosis program further includes an MIL controlling object for controlling said at least one MIL based on said MIL information outputted from said malfunction-information managing object.

13. (original) A vehicular control device according to claim 7, wherein said object oriented self-diagnosis program further includes an MIL controlling object for controlling said at least one MIL based on said MIL information outputted from said malfunction-information managing object.

14. (currently amended) An object oriented self-diagnosis program that implements a self-diagnosis function for informing occurrence of abnormality in ~~at least one~~ a plurality of diagnosis targets provided in a vehicle by controlling at least one malfunction indicator light (MIL) in such a manner that operation of said at least one MIL is selected from one of lighting-on, flashing and lighting-off based on a result of a malfunction detection operation of each one of said ~~at least one~~ plurality of diagnosis targets, said object oriented self-diagnosis program comprising:

~~at least one~~ a plurality of malfunction-information storing objects, each of which is
provided to a corresponding one of said plurality of diagnosis targets and that specifies a control
instruction for instructing a control operation of said at least one MIL ~~with respect to~~
~~malfunction information of said each one of said at least one diagnosis target~~ to be a selected
condition based on ~~said~~ malfunction information of said ~~each~~ corresponding one of said at least
~~one plurality of diagnosis targets~~, said selected condition being one of the following possible
conditions: lighting-on, flashing and lighting-off, and said malfunction information of said ~~each~~
corresponding one of said at least one plurality of diagnosis targets being determined based on
said result of said malfunction detection operation of said ~~each~~ corresponding one of said at least
~~one the diagnosis targets~~ in view of a level of malfunction of said corresponding each one of said
~~at least one the diagnosis targets~~; and

a relationship between said malfunction-information and said selected condition of one of
said plurality of malfunction-information storing objects being different from that of another one
of said plurality of malfunction-information storing objects;

a malfunction-information managing object that carries out adjustment of said control
instruction of ~~said at least one~~ of said MIL specified by said at least one malfunction-information
storing objects based on said malfunction information of said ~~each~~ corresponding one of said at
~~least one diagnosis targets~~ and outputs MIL information for controlling said at least one MIL
based on a result of said adjustment of said control instruction of said at least one MIL.

15. (currently amended) An object oriented self-diagnosis program according to
claim 14, wherein:

~~said~~ at least one malfunction-information storing object of said plurality of malfunction-information storing objects stores said malfunction information of said ~~each~~ corresponding one of said ~~at least one~~ diagnosis targets; and

said malfunction-information managing object commands said at least one malfunction-information storing object to store said malfunction information of said ~~each~~ corresponding one of said ~~at least one~~ diagnosis targets based on said result of said malfunction detection operation of said ~~each~~ corresponding one of said ~~at least one~~ the diagnosis targets.

16. (currently amended) An object oriented self-diagnosis program according to claim 14, wherein each one of said ~~at least one~~ malfunction-information storing objects is prepared for each corresponding one of said ~~at least one~~ diagnosis targets or is prepared for each corresponding one of ~~at least one~~ malfunction check items that corresponds to said ~~at least one~~ diagnosis targets, respectively.

17. (currently amended) An object oriented self-diagnosis program according to claim 14, wherein:

~~said~~ at least one malfunction-information storing object of said plurality of malfunction-information storing objects stores relationship information indicative of relationship between said malfunction information of said corresponding one of said plurality of diagnosis targets and said control instruction specified by said at least one malfunction storing object; and

said at least one malfunction-information storing object specifies said control instruction of said at least one MIL based on said relationship information.

18. (currently amended) An object oriented self-diagnosis program according to claim 14, wherein ~~said~~ at least one malfunction-information storing object of said plurality of malfunction-information storing objects specifies said control instruction based on said malfunction information of said ~~each~~ corresponding one of said ~~at least one~~ diagnosis targets when a request for retrieving said control instruction is received from said malfunction-information managing object.

19. (currently amended) An object oriented self-diagnosis program according to claim 14, wherein:

said control instruction specified by at least one of the plurality of malfunction-information storing objects is selected from a plurality of control instructions having different predetermined priority levels; and

said malfunction-information managing object outputs one of said control instructions having a highest priority level as said MIL information.

20. (currently amended) An object oriented self-diagnosis program that implements a self-diagnosis function for informing occurrence of abnormality in ~~at least one~~ diagnosis targets provided in a vehicle by controlling at least one malfunction indicator light (MIL) in such a manner that operation of said at least one MIL is selected from one of lighting-on, flashing and lighting-off based on a result of a malfunction detection operation of each one of said ~~at least one~~ plurality of diagnosis targets, said object oriented self-diagnosis program comprising:

a malfunction-information managing object that outputs MIL information for controlling said at least one MIL to be a selected condition when a request for controlling said at least one

MIL is received, said selected condition being one of the following possible conditions: lighting-on, flashing and lighting-off, and said request for controlling said at least one MIL being different from a request for executing said malfunction detection operation of said each one of said ~~at least one~~ diagnosis targets; and

a plurality of malfunction-information storing objects, each of which stores malfunction-information of a corresponding one of the diagnosis targets determined based on said result of said malfunction detection operation of said corresponding diagnosis target in view of a level of malfunction of said corresponding target diagnosis target,

wherein each of the plurality of malfunction-information storing objects specifies a relationship between malfunction-information of its corresponding diagnosis target and said selected condition for controlling said at least one MIL, the relationship for one of the plurality of malfunction-information storing objects being different from that of another of the plurality of malfunction-information storing objects.

21. (currently amended) An object oriented self-diagnosis program according to claim 20, ~~further including at least one malfunction-information storing object that stores malfunction-information of said each one of said at least one diagnosis target determined based on said result of said malfunction detection operation of said each one of said at least one diagnosis target in view of a level of malfunction of said each one of said at least one diagnosis target,~~ wherein:

said malfunction-information managing object commands ~~said at least one~~ of said malfunction-information storing objects to store said malfunction information of said ~~each one of~~

~~said at least one corresponding~~ diagnosis target based on said result of said malfunction detection operation of said ~~each one of said at least one corresponding~~ diagnosis target; and

said malfunction-information managing object outputs said MIL information for controlling said at least one MIL based on said malfunction information of said ~~each one of said at least one corresponding~~ diagnosis target stored by said at least one malfunction-information storing object.

22. (currently amended) An object oriented self-diagnosis program according to claim 14, wherein said malfunction-information managing object outputs said MIL information when a request for controlling said at least one MIL is received, said request for controlling said at least one MIL being different from a request for executing said malfunction detection operation of said ~~each one of said at least one corresponding~~ diagnosis targets.

23. (canceled)

24. (currently amended) An object oriented self-diagnosis program that implements a self-diagnosis function for informing occurrence of abnormality ~~in at least one diagnosis targets~~ provided in a vehicle by controlling at least one malfunction indicator light (MIL) in such a manner that operation of said at least one MIL is selected from one of lighting-on, flashing and lighting-off based on a result of a malfunction detection operation of ~~each one of said at least one diagnosis targets~~, said object oriented self-diagnosis program comprising:

~~at least one~~ a plurality of malfunction-information storing objects, each of which that stores malfunction information of ~~said each one of said at least one~~ a corresponding one of the

diagnosis targets determined based on said result of said malfunction detection operation of said ~~each one of said at least one~~ corresponding diagnosis target in view of a level of malfunction of said ~~each one of said at least one~~ corresponding diagnosis target;

a malfunction-information managing object that commands ~~said at least one of said~~ malfunction-information storing objects to store said malfunction information of said ~~each one of said at least one~~ corresponding diagnosis target based on said result of said malfunction detection operation of said ~~each one of said at least one~~ corresponding diagnosis target, said malfunction-information managing object outputting MIL information for controlling said at least one MIL to be a selected condition based on said malfunction information of said ~~each one of said at least one~~ corresponding diagnosis target stored by said at least one of said malfunction-information storing objects, said selected condition being one of the following possible conditions: lighting-on, flashing and lighting-off; and

an MIL controlling object for controlling said at least one MIL based on said MIL information outputted from said malfunction-information managing object-;

wherein each of the plurality of malfunction-information storing objects specifies a relationship between malfunction-information of its corresponding diagnosis target and said selected condition for controlling said one MIL, the relationship for one of the plurality of malfunction-information storing objects being different from that of another of the plurality of malfunction-information storing objects.

25. (original) An object oriented self-diagnosis program according to claim 14, further comprising an MIL controlling object for controlling said at least one MIL based on said MIL information outputted from said malfunction-information managing object.

26. (original) An object oriented self-diagnosis program according to claim 20, further comprising an MIL controlling object for controlling said at least one MIL based on said MIL information outputted from said malfunction-information managing object.

27. (currently amended) A vehicular control device according to claim ~~13~~5, wherein the result of the malfunction detection operation of each one of said at least one diagnosis targets is categorized into one selected from at least three levels, which include normal, temporarily abnormal and abnormal.

28. (currently amended) A vehicular control device according to claim 7, wherein the result of the malfunction detection operation of each one of said ~~at least one~~ diagnosis targets is categorized into one selected from at least three levels, which include normal, temporarily abnormal and abnormal.

29. (canceled)

30. (currently amended) A vehicular control device according to claim 11, wherein the result of the malfunction detection operation of each one of said ~~at least one~~ diagnosis targets is categorized into one selected from at least three levels, which include normal, temporarily abnormal and abnormal.

31. (currently amended) An object oriented self-diagnosis program according to claim 14, wherein the result of the malfunction detection operation of each one of said ~~at least one~~ diagnosis targets is categorized into one selected from at least three levels, which include normal, temporarily abnormal and abnormal.

32. (currently amended) An object oriented self-diagnosis program according to claim 20, wherein the result of the malfunction detection operation of each one of said ~~at least one~~ diagnosis targets is categorized into one selected from at least three levels, which include normal, temporarily abnormal and abnormal.

33. (canceled)

34. (currently amended) An object oriented self-diagnosis program according to claim 24, wherein the result of the malfunction detection operation of each one of said ~~at least one~~ diagnosis targets is categorized into one selected from at least three levels, which include normal, temporarily abnormal and abnormal.

35. (new) A vehicular control device having a self-diagnosis function for informing occurrence of abnormality in a plurality of diagnosis targets of different types by controlling at least one malfunction indicator light (MIL) in such a manner that operation of said at least one MIL is selected from one of lighting-on, flashing and lighting-off based on a result of a malfunction detection operation of each one of said plurality of diagnosis targets, said vehicular

control device comprising an object oriented self-diagnosis program stored therein for implementing said self-diagnosis function, said object oriented self-diagnosis program including:

a plurality of malfunction-information storing objects, each of which is provided to a corresponding one of said plurality of diagnosis targets and specifies a control instruction for instructing a control operation of said at least one MIL to be a selected condition with respect to malfunction information of said corresponding one of said plurality of diagnosis targets based on said malfunction information of said corresponding one of said plurality of diagnosis targets, said selected condition being one of the following possible conditions: lighting-on, flashing and lighting-off, a relationship between said malfunction information and said selected condition of one of said plurality of malfunction-information storing objects being different from that of another one of said plurality of malfunction-information storing objects, and said malfunction information of said each one of said plurality of diagnosis targets being determined based on said result of said malfunction detection operation of said each one of said plurality of diagnosis targets in view of a level of malfunction of said each one of said plurality of diagnosis targets; and

a malfunction-information managing object that carries out adjustment of said control instruction of said at least one MIL specified by at least one of said malfunction-information storing objects based on said malfunction information of said corresponding one of said plurality of diagnosis targets and outputs MIL information for controlling said at least one MIL based on a result of said adjustment of said control instruction of said at least one MIL.